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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/605,092

09/08/2003

Satoshi Kitamura

SIC-03-035

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29863

7590

03/22/2006

DELAND LAW OFFICE

P.O. BOX 69

KLAMATH RIVER, CA 96050-0069

EXAMINER

PARRIES, DRU M

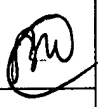
ART UNIT

PAPER NUMBER

2836

DATE MAILED: 03/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/605,092	Applicant(s) KITAMURA ET AL. 	
	Examiner Dru M. Parries	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2006.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-37 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 08 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed January 18, 2006 have been fully considered but they are not persuasive.
2. In response to applicant's arguments, the recitation of a "bicycle power supply" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Therefore, the argument saying that Nakabayashi is non-analogous art is not persuasive.
3. The Examiner would like to point out that Nakabayashi's invention is for a power distributor, so modifying Nakabayashi with Mitchell's method of distributing power is for the case where Nakabayashi has an equal number of loads as storage elements in his power distributor. Also, Mitchell teaches the motivation for matching one storage element to each electrical component, which is, it allows a centralized power supply to provide power to a variety of components with varying voltage requirements (Abstract) and to provide separately regulated power to multiple loads while reducing the number of required power supplies (Col. 1, lines 30-34).
4. The Examiner agrees that Nakabayashi doesn't teach that charge is being wasted during charging or that the batteries are being charged unevenly, however, he doesn't teach that charge

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is being conserved or batteries are being charged evenly either. Since he is silent on these issues the problems may exist, so modifying this reference with other references that positively recite conservation of charge and charging batteries evenly are legitimately motivated to make Nakabayashi's invention run more efficiently.

5. The objection to claims 32, 35, and 36 are withdrawn.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-5, and 13-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakabayashi et al. (JP 04-150729 A) and Mitchell (6,355,990). Regarding claim 1, Nakabayashi teaches first and second storage elements (12, 13) receiving power from an AC power supply (8) (Fig. 3). Nakabayashi fails to teach the storage elements supplying power to two different electrical components. Mitchell teaches two storage elements that provide power to two different electrical components (R1, R2). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the storage elements supply power to different components because it allows for more precise control over the system (i.e. providing precise output voltages to each component as needed).

Regarding claims 2 and 3, Nakabayashi doesn't teach a power inhibiting unit structured to prevent power from being transferred from the first storage element to the second electrical

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component and vice versa. Mitchell teaches a power inhibiting structure to prevent power from being transferred from first storage to second electrical component and vice versa (Fig. 1A and 6). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate this structure into Nakabayashi's invention so that the correct amount of power will be provided into each load and there is no risk for overvoltage or burn out.

Regarding claims 4, 5, 13-22, Nakabayashi teaches a rectifier circuit (9) which converts and stabilizes the AC current to DC current and is coupled to first and second storage elements. He also teaches the first and second storage elements to receive current in parallel. He teaches a reverse current inhibiting unit that comprises diodes (15) between the rectifier circuit and the first and second storage elements. Nakabayashi also teaches a power switch unit (14), included in the reverse current inhibiting unit, which selectively switches current from rectifier circuit to at least one of first or second storage element. (Abstract; Figs. 2 & 3) Nakabayashi fails to teach the power switch unit comprising first and second switch circuits to selectively switch current from rectifier to first and second storage elements in response to the voltage at the first and second storage elements. Mitchell teaches first and second switch circuits (S1, S2) that selectively switch current to the first and second storage elements based on the voltage at the first and second storage elements (Col. 1, lines 60-67). It would have been obvious to one of ordinary skill in the art at the time of the invention to selectively switch current to the storage elements so that the correct amount of voltage is supplied to each load.

8. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakabayashi et al. (JP 04-150729 A) and Mitchell (6,355,990) as applied to claims 1, 4 and 5 above, and further in view of Flory, IV (6,388,392). Nakabayashi and Mitchell teach a power supply system

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as described above. Mitchell also teaches a power switch unit (S1) that selectively switches current from the rectifier circuit to the first storage element (C1) in response to the voltage of the first storage element. They both fail to teach power flowing from the first storage element to the second storage element through diodes. Flory, IV teaches current that flows from the first storage element (ESB of 70a) to the second storage element (ESB of 70b) via a diode (62 of 70b). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate this circuit design into Nakabayashi's invention so that when the first storage element is fully charged it can pass the excess charge onto the second storage element so no charge will be wasted in the first storage element, not being needed or used.

9. Claims 10-12, and 23-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakabayashi et al. (JP 04-150729 A), Mitchell (6,355,990) and Flory, IV (6,388,392) as applied to claims 1, 4-7, 13, and 16 above, and further in view of Turner (2002/0014366). Nakabayashi, Mitchell and Flory teach a power supply system as described above. Nakabayashi also teaches diodes between all switch units and storage elements. Mitchell also teaches the idea of having a plurality of energy storage units to provide power to a plurality of electrical components (abstract, lines 10-16) and the idea of a power switch unit (S_n) that selectively switches current to the nth storage element (C_n) in response to the voltage of the nth storage element. Therefore, Mitchell teaches a first split first storage element (C_n) and second split first storage element (C_(n+1)) (same with first and second split second storage elements). The three above references fail to explicitly teach the type of electrical components being powered. Turner teaches the type of electrical components being that of a bicycle. Turner teaches a first electrical component being a mechanical adjusting mechanism (166, 168) (i.e. transmission or suspension) and a

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second electrical component being a microprocessor (150) and/or a sensor element (184), which has a lower capacitance than the first electrical component. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate these electrical components as the loads of Nakabayashi's power system because the type of load wasn't explicitly taught and these loads are known in the art.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dru M. Parries whose telephone number is (571) 272-8542. The examiner can normally be reached on M-Th from 8:00am to 5:00pm. The examiner can also be reached on alternate Fridays.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus, can be reached on 571-272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DMP

3-17-2006



BRIAN SIRCUS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800